CLAIMS:

1. An energetic rotary machine, having an exterior housing in which are dynamically set up two complementary compressive parts each having a specific number of sides, being a cylindrical and paddle part, these parts realizing compression chambers in complicity, the number of compressions realized per cycle being equal or above the number of sizes of the paddle, the cylindrical part having an annular form with an circular exterior profile and an interior opening chosen in function with the form of the paddle, the paddle being set up in the inferior opening of the cylindrical part, these complementary compressive parts being realized between themselves and synchronized by a set of mechanical inductions, one of the compressive parts being connected directly or indirectly to a tree of exit power, this machine characterizing itself by the rotation of the cylindrical part around the paddle structure, thus describing a rotary movement, whereas each of the points of the paddle structure realize, for a complete machine cycle, a circular figure, the centers of these circular figures being equidistant between themselves, and located in periphery and at an equal distance of the center of the cylindrical cavity, the paddle structure realizing a circular displacement all while conserving a same orientation for all of its course, thus effecting a movement of rotary translation.

2. A rotary type energetic machine, having an exterior housing with a cylindrical cavity in which are set up dynamically two complementary compressive parts each having a specific number of sides, being a cylindrical part and a paddle part, these parts realizing compression chambers in complicity, the number of compressions realized per cycle being equal or superior to the number of sides of the paddle structure, the cylindrical part being set up in a rotary manner in the cylindrical cavity, the cylindrical

part having an annular form with a circular exterior profile and an interior opening chosen in function of the form of the paddle structure, the paddle structure being set up in the interior opening of the cylinder, these complementary compressive parts being connected between themselves and synchronized by a set of mechanical inductions, one of these compressive parts being directly or indirectly connected to a tree of exit power, this machine characterizing itself by the rotation of the cylindrical part around the paddle structure, thus describing a rotary movement, whereas for each of the points of the paddle structure realized, for a complete cycle of the machine, a geometric figure defined by an N number of successive lobes in which the center of this geometric figure coincides with the center of the cylindrical cavity, and which N is superior to two.

3. A machine according to claim 2, in which a part of the mechanical induction allows the realization of a positioning of the paddle part is defined in function with the compressive parts, and in which the mechanical induction part allows the control of the orientation of the paddle part is defined in function with the geometric figure.

4. A machine according to claim 1, in which the paddle has a retro rotation speed equal to the speed of the eccentric's rotation, this paddle part being coupled to the cylindrical part.

5. A machine according to claim 2, in which the ratio between the retro rotation speed of the paddle structure and the rotation speed of its eccentric is located between 1/X, where X is the number of sides of the paddle part, and 1/1.

6. A machine according to claim 2, in which the geometric figure has N lobes described by the paddle part is produced by successively realizing the sides of this figure.

7. A machine according to claim 2, which the order of compressions of a cycle is produced by displacing the paddle part according to the geometric figure by realizing its lobes non successively, the totality of the lobes of this figure being realized by more than a rotation of the paddle part.

8. A machine according to claim 1, in which the dynamic of the compressive parts is realized inversely, the cylindrical part realizing the movement of rotational translation and the paddle part realizing the rotational movement.

9. A machine according to claim 2, in which the dynamic of the compressive parts is realized inversely, the points of the cylindrical part realizing the geometric figure, and the paddle part realizing the rotational movement.

10. A machine according to claim 1 or 2, in which the number of sides of the paddle structure is superior by one to that of the cylindrical part, thus realizing the machine in its post rotary form.

11. A machine according to claim 1 or 2, in which the number of sides of the paddle structure is inferior by one to that of the cylindrical part, thus realizing the machine under its retro rotary form.

12. A machine according to claim 1 or 2, in which the paddle part is realized by a plurality of the paddle parts, each of these parts possessing its own mechanical induction, and each of these parts acting in complicity and synchronization with the cylindrical part.

13. A machine according to claim 1, in which the paddle structure is constituted of a group of straight

segments, connected non-rigidly between themselves by their extremities in such a manner as to form a flexible paddle structure, called paddle structure, this structure being realized dynamically inside the cylindrical part.

14. A machine according to claim 13, in which the movement of the paddle points of the paddle structure is rectilinear alternative.

15. A machine according to claim 1 or 2, realized when the support of one of the compressive parts is activated with a mechanical group comprising a supplementary induction realized in combination with the original induction, making the rotary movement of a compressive part pass to a planetary movement, or even making the simple planetary movement of a compressive part to a composed planetary movement.

16. A machine according to claim 1, putting in layered composition many groups of compressive parts, the cylindrical part of one of them which could be used, by its exterior surface, as a paddle part of the exterior compressive group, and by its interior surface, the cylindrical part to the group of interior compressive parts.

17. A machine according to claim 1 or 2, in which the compressive parts have a rotation in opposite direction, when they're observed from the exterior.

18. A machine according to claim 1, in which the movement of one of its compressive parts is irregular, alternatively realizing accelerations and decelerations which could add, when the compressive part possesses a planetary movement, an oscillatory character to it, these accelero-decelerative movement which could be realized with the support of polycammed gears.

19. A machine according to claim 1 or 2, in which, the support gear of the mechanical induction of one of its compressive parts, is dynamic.

20. A machine according to claim 1 or 2, in which the mechanical induction supporting the paddle structure is one of the following: a mono induction, an intermediate gear mechanic, a poly induction mechanic, an alternative poly induction mechanic, a hoop gear mechanic, a mechanic by hoop gear with chain, a mechanic by double internal gears, a mechanic by heel gear, a mechanic by gear like structure, a mechanic by unitary gear, a mechanic by central active gear, a mechanic by stopped poly induction, a mechanic by subtractive poly induction.

These inductions being realized either with central fixed support gears, with dynamic central support gear, with peripheral support gear.

21. A machine according to claim 7, in which the mechanical induction supporting the cylindrical part is one of the following: a mono induction, an intermediate gear mechanic, a poly induction mechanic, an alternative poly induction mechanic, a hoop gear mechanic, a mechanic by hoop gear with chain, a mechanic by double internal gears, a mechanic by heel gear, a mechanic by gear like structure, a mechanic by unitary gear, a mechanic by central active gear, a mechanic by stopped poly induction, a mechanic by subtractive poly induction.

These inductions being realized either with a central fixed support gear, with dynamic central support gear, with peripheral support gear

22. A machine according to claim 1 or 2, in which the inductions of the compressive parts share a common element, this element being:

- an eccentric

- a dynamic support gear of a planetary induction or
- a paddle

23. A machine according to claims 1 or 2, in which the exit tree of power is either:

- the tree of the eccentric supporting the paddle compressive part or
- the tree supporting the cylindrical compressive part.

24. A machine according to claim 2, in which the induction of the paddle part is said descending, this induction characterizing itself by the rigid set up on the paddle part of a peripheral support, this gear activating indirectly or directly an induction gear, this induction gear being set up rigidly in the center of the cylindrical part of the machine, or on an axe of the cylindrical part.

25. A machine according to claim 1 or 2, used as : engine, compressor, collection machine, pump, propeller, turbine, mechanical part of a mechanical turbine, artificial heard, or wind mill.

26. A machine according to claim 1 or 2 in which we confer the paddle part to an aerodynamic curve allowing to realize the transport of substances in the machine:

- from the periphery towards the center
- from the center towards the periphery or
- from a lateral face to another.

27. A machine according to claim 2, in which the valves, spark plugs are installed on the rotary part, or the paddle part.

28. A machine according to claim 1 or 2, in which the emplacements of the valves, spark plugs and other accessories are set up in function of the material figures and the realization sequence of the compressions.